REMARKS

Claims 1, 3-8, 10-30, 33-37, 40, 41, 43-46, 50-60, and 64-67 are pending. In this paper, claims 1, 6, 12, 21, 26, 30, 37, 40, 50, and 55 have been amended and new claim 67 has been added to recite additional features of the embodiments disclosed in the specification.

I. The Rejection under 35 USC § 112, First Paragraph

In the Office Action, claims 1, 6, 12, 21, 26, 30, 37, 40, 50 and 55 were rejected on grounds that the specification fails to provide a written description of the following phrase: "wherein the call is re-established between the first and second mobile terminals through a signal path that does not pass through an intervening or repeating subscriber terminal." Specifically, the Examiner contends that Figure 1 shows the signal path passing through a base station, and the Examiner has interpreted the base station as a repeater.

To remove any ambiguity relating to these features, the claims have been amended to recite that the signal path does not pass through an "intervening mobile subscriber terminal or a repeating mobile subscriber terminal." Withdrawal of the § 112 rejection is respectfully requested in view of these amendments.

II. The Rejections under 35 USC § 103(a)

Claims 1, 3, 30, 40 and 55 were rejected for being obvious in view of a Murphy-Park combination. Applicants request reconsideration of this rejection for the following reasons.

Claim 1 recites the following:

(1) a first mobile terminal which transmits state information of the first mobile terminal to the base station, wherein the base station transmits the state information to a second mobile terminal to inform the second mobile terminal that a call was released based on a low reception signal strength of the first mobile terminal, and

(2) the second mobile terminal monitors the reception signal strength of first mobile terminal after the call release and performs an automatic call connection operation to re-establish the call when the signal strength of the first mobile terminal exceeds a predetermined level.

The Murphy patent does not teach or suggest these features of (1) above. That is, Murphy discloses transmitting a pre-recorded voice message from one terminal to another, but only when the battery of the transmitting terminal is low. A low battery condition does not correspond to a low reception signal strength of a mobile terminal. Also, Murphy does not transmit its pre-recorded message or any other state information when the first terminal during a call experiences low reception signal strength.

Murphy also does not teach or suggest the features of (2) above.

The Park patent discloses a cell phone that detects a reception (RSSI) level. When a call is disconnected, the phone performs a redial function but only in response to a user pressing an automatic redial key on the phone (column 2, lines 51-59). Unlike claim 1, the Park phone only detects **its own** reception level and not the reception level of the other phone. (See also column 3, lines 14-18: control unit 130 detects the current reception level in the transceiver 100 ...). This is apparent from column 3, lines 1-13, which discloses that the RSSI level detected by control

unit 130 is the detected signal quality of transceiver 100, which is its own transceiver and not the transceiver of the other phone that was connected during the call.

Thus, Park does not teach or suggest the features of (1) above, i.e., a first mobile terminal which transmits state information of the first mobile terminal to the base station, wherein the base station transmits the state information to a second mobile terminal to inform the second mobile terminal that a call was released based on a low reception signal strength of the first mobile terminal. Park also fails to teach or suggest the features of (2) above.

That is, when the signal strength of the Park phone is too low, the call is disconnected and then re-connected when the user presses an automatic redial key. However, Park does not teach or suggest that the second mobile terminal monitors the reception signal strength of first mobile terminal after the call release and performs an automatic call connection operation to re-establish the call when the signal strength of the first mobile terminal exceeds a predetermined level.

Applicants submit that claim 1 is allowable over a Murphy-Park combination based on the foregoing differences. Furtherance of claim 1 and its dependent claims to allowance is respectfully requested.

Claim 30 recites "transmitting information indicative of the operational state [of a first mobile terminal] to a second mobile terminal, the second mobile terminal outputting a relative signal strength indicator (RSSI) of the first mobile terminal based on the transmitted operational state information," and that "information indicative of the operational state of the first mobile terminal is transmitted to the second mobile terminal along a signal path that does not pass

through an intervening or repeating subscriber terminal." These features are not taught or suggested by the Murphy and Park patents, whether taken alone or in combination. Furtherance of claim 30 and its dependent claims to allowance is therefore respectfully requested.

Claim 40 recites "displaying the operational state information [of a first mobile terminal] on a second mobile terminal, wherein the operational state information includes at least one of signal strength information or battery information of the first mobile terminal." These features are not taught or suggested by Murphy or Olds, e.g., Murphy discloses outputting a voice message indicative of low battery of another terminal but it does not display operational state information as recited in claim 40.

Moreover, claim 40 recites that "the operational state information is received for a call connected between the first and second mobile terminals" and that "said call is connected between the first and second mobile terminals through a signal path that does not pass through an intervening or repeating subscriber terminal." These features are also not taught or suggested by Murphy or Olds, whether taken alone or in combination. Furtherance of claim 40 and its dependent claims to allowance is therefore respectfully requested.

Claim 55 recites "a controller which performs an automatic call connection operation to re-establish a call with the mobile terminal when the operational state information of the other terminal is determined to lie within a predetermined range," and that "the call is to be connected between the terminal and the other terminal through a signal path that does not pass through an intervening or repeating subscriber terminal." These features are also not taught or suggested by

Murphy or Olds, whether taken alone or in combination. Furtherance of claim 55 and its dependent claims to allowance is therefore respectfully requested.

Claim 4 was rejected for being obvious in view of Murphy and Park taken in combination with Toda and Hayashi. Applicants traverse this rejection on grounds that Toda and Hayashi do not teach or suggest the features of base claim 1 missing from the Murphy and Park patents.

Claims 5 and 6 were rejected for being obvious in view of Murphy and Park taken in combination with Chapman. Applicants traverse the rejection of claim 5 on grounds that Chapman does not teach or suggest the features of base claim 1 missing from the Murphy and Park patents.

Claim 6 recites "storing, in a base station, state information transmitted from a first mobile terminal, the state information indicative of a signal strength of the first mobile terminal." Murphy and Park do not teach or suggest these features, e.g., Murphy outputs on one terminal a voice message indicative of low battery of another terminal. Murphy does not store state information indicative of signal strength of one terminal in another terminal. And, the Park phone only measures its own signal strength, not the signal strength of another terminal. The Chapman patent also fails to teach or suggest these features.

Further, claim 6 recites a monitoring function that includes "periodically receiving state information from the first mobile terminal and updating previously stored state information," where the state information is indicative of signal strength of the other terminal. Murphy, Park, and Chapman also fail to teach or suggest these features.

Further, claim 6 recites "transmitting the stored state information transmitted from the

first mobile terminal to the second mobile terminal when the call connection between the first and second mobile terminals is interrupted, automatically transmitting a recall signal when the call interruption is sensed," and "wherein the recall signal establishes a connection between the first and second mobile terminals through a path that does not pass through an intervening or repeating subscriber terminal." These features are not taught or suggested by Murphy, Park, or Chapman, whether taken alone or in combination.

Claims 7, 8, 10, 12-14 and 16-20 were rejected for being obvious in view of Murphy, Park, Chapman, and Toda. Applicants traverse the rejection of claims 7, 8, and 10 on grounds that Chapman and Toda do not teach or suggest the features in base claim 6 missing from Murphy and Park.

Claim 12 recites "when the call has been interrupted because of a network failure, automatically attempting a recall from the originating side terminal; when a call termination message is received from the originating side terminal or from the receiving side terminal, releasing the call connection between the terminals at the base station; and transmitting the state information of one of the originating side and receiving side terminals to the other of the originating side and receiving side terminals after the call connection is released."

Further, claim 12 recites "wherein the call connection and recall is established between the originating and receiving side terminals through a signal path that does not pass through an intervening or repeating subscriber terminal." These features are not taught or suggested by the cited references, whether taken alone or in combination. Furtherance of claim 12 and its dependent claims to allowance is therefore respectfully requested.

Claim 11 was rejected for being obvious in view of Murphy, Park, Chapman, Toda, and Hayashi. This rejection is traversed on grounds that Chapman, Toda, and Hayashi does not teach or suggest the features of base claim of claim 11 missing Murphy and Park. The rejection of claim 15 is traversed for similar reasons.

Claims 21, 23, 25, 33-36, 41, 43-46 and 56-58 were rejected under 35 U.S.C. §103(a) over Murphy in view of Toda. Applicants request the Examiner to withdraw this rejection for the following reasons.

Claims 21 recites "displaying the state information indicative of the signal strength of the receiving side terminal on the originating side terminal." These features are not taught or suggested by the Murphy or Toda patents. Toda discloses a mobile terminal having a notification section 24 that causes a symbol to be displayed when a telephone number is not received of a calling party (column 8, lines 1-8) or when a call re-establishment operation is performed (column 8, lines 56-62). However, Toda does not teach or suggest displaying on one terminal a symbol indicative of the signal strength of the other terminal as required by claim 21.

Applicants submit that claim 21 and its dependent claims are allowable based on these differences.

Claim 22 was rejected for being obvious in view of a Murphy-Toda-Wooten combination. Applicants traverse this rejection on grounds that the Wooten patent does not teach or suggest the features of base claim 21 missing from the Murphy and Toda patents.

Claim 24 was rejected for being obvious in view of a Murphy-Toda-Hayashi combination. Applicants traverse this rejection on grounds that the Hayashi patent does not teach or suggest the features of base claim 21 missing from the Murphy and Toda patents.

Claims 26, 28, 37, 50-53, 59 and 66 were rejected for being obvious in view of a Murphy-Oota combination. Applicants request withdrawal of this rejection for the following reasons.

Claim 26 recites "displaying state information of the originating side terminal in the receiving side terminal, wherein the state information includes battery information of the originating side terminal." The Murphy patent discloses transmitting a voice message to another mobile terminal to inform the other terminal of the battery condition of the originating terminal. Murphy does not teach or suggest displaying batter information of the originating terminal as required by claim 26.

The Oota publication discloses a first mobile terminal which displays the phone number of a second mobile terminal. See Paragraph [31]. This paragraph also discloses displaying battery status information, but this battery status information is not of the second terminal but rather corresponds to its own battery. This is clear from the battery symbol shown in Figures 3a-d. When Paragraph [31] is read in light of Figure 3, it is evident that the battery status being displayed is of the first terminal, not of the other terminal.

Thus, Oota does not teach or suggest the features of claim 26 missing from the Murphy patent. Furtherance of claim 26 and its dependent claims to allowance is therefore respectfully requested.

Claim 37 recites "displaying the operational state information on the second mobile terminal." These features are not taught or suggested by the Murphy or Oota references, whether taken alone or in combination. Furtherance of claim 37 and its dependent claims to allowance is therefore respectfully requested. Claim 50 recites similar features and therefore is also allowable along with its dependent claims.

Claim 59 recites "a display that displays the operational state information on a second mobile terminal, wherein the operational state information is indicative of a low battery voltage condition of the other terminal or a low signal strength condition experienced by the other terminal." These features are not taught or suggested by the cited references, whether taken alone or in combination.

Claims 27, 29, 54, 64, and 65 were rejected for being obvious in view of various combinations of the Oota, Wooten, Hayashi, Murphy, Chapman, and Toda patents. Applicants traverse the rejection of these claims on grounds that none of these references either alone or in combination teach or suggest all of the features of the base claims from which claims 27, 29, 54, 64, and 65 depend.

New claim 67 has been added to the application to recite that the call connection operation of claim 1 is "automatically performed by the second mobile terminal to re-establish the call independent from any user command to perform the automatic call operation input after the call release." These features are not taught or suggested by the cited references, whether taken alone or in combination. For example, the Park patent discloses performing an automatic redial function, but only in response to a user

pressing a redial key. (See column 2, lines 51-59). However, the claimed invention performs an automatic call connection operation independent from (e.g., without receiving) any user command input after the call release and, more specifically, in response to recovery of the reception signal strength of the other terminal.

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and timely allowance of the application is respectfully requested.

To the extent necessary, a petition for an extension of time under 37 CFR § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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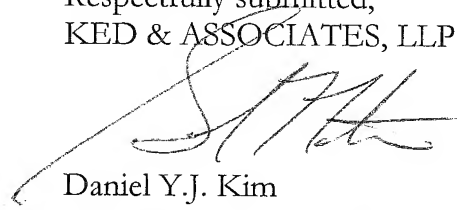

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